



Analytical Resources, Incorporated
Analytical Chemists and Consultants

December 30, 2010

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SC18 (revised 1/21/11)

Dear Tom:

Please find enclosed analytical results and Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted six water samples on December 22, 2010. The samples were received in good condition.

The samples were analyzed for total metals and general chemistry parameters, as requested on the COC.

No analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Kelly Bottom
Client Services Manager
kellyb@arilabs.com
206-695-6211

Enclosures

cc: eFile SC18

KB/kb

5010020202

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider

COC No(s): _____ (NA)

Assigned ARI Job No: SC18

Project Name: Jorgenson Forge PLO Cleanout

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? _____

YES (NO)

Were custody papers included with the cooler? _____

(YES) NO

Were custody papers properly filled out (ink, signed, etc.) _____

(YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.3

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90941619

Cooler Accepted by: JM Date: 12/22/10 Time: 1100

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? _____

YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? _____

NA (YES) NO

Were all bottles sealed in individual plastic bags? _____

YES (NO)

Did all bottles arrive in good condition (unbroken)? _____

(YES) NO

Were all bottle labels complete and legible? _____

(YES) NO

Did the number of containers listed on COC match with the number of containers received? _____

(YES) NO

Did all bottle labels and tags agree with custody papers? _____

(YES) NO

Were all bottles used correct for the requested analyses? _____

(YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...

NA (YES) NO

Were all VOC vials free of air bubbles? _____

(NA) YES NO

Was sufficient amount of sample sent in each bottle? _____

(YES) NO

Date VOC Trip Blank was made at ARI: _____

(NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

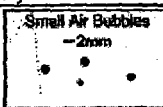


Samples Logged by: JM Date: 12/22/10 Time: 1115

**** Notify Project Manager of discrepancies or concerns ****

| Sample ID on Bottle | Sample ID on COC | Sample ID on Bottle | Sample ID on COC |
|---------------------|------------------|---------------------|------------------|
| | | | |
| | | | |
| | | | |
| | | | |

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

| | | | |
|---|---|---|-------------------|
|  |  |  | Small → "sm" |
| | | | Peabubbles → "pb" |
| | | | Large → "lg" |
| | | | Headspace → "hs" |

0016F
3/2/10

Cooler Receipt Form

Revision 014

SC18: 00003

PRESERVATION VERIFICATION 12/22/10
Page 1 of 1



ARI Job No: SC18

PC: Sue D.
VTSR: 12/22/10

Inquiry Number: NONE
Analysis Requested: 12/22/10
Contact: Colligan, Tom
Client: Floyd/Snider
Logged by: JM
Sample Set Used: Yes-440
Validatable Package: No
Deliverables:

Project #: P2JO
Project: Jorgenson Forge PLO Cleanout
Sample Site:
SDG No:
Analytical Protocol: In-house

| LOGNUM ARI ID | CLIENT ID | CN >12 | WAD >12 | NH3 <2 | COD <2 | FOG <2 | MET <2 | PHEN <2 | PHOS <2 | TKN <2 | NO23 <2 | TOC <2 | S2 >9 | AK102 <2 | Fe2+ <2 | DMET FLT | DOC FLT | PARAMETER | ADJUSTED TO | LOT NUMBER | AMOUNT ADDED | DATE/BY |
|-------------------|---------------------|-----------|------------|-----------|-----------|-----------|-----------|------------|------------|-----------|------------|-----------|----------|-------------|------------|-------------|------------|-----------|----------------|---------------|-----------------|---------|
| 10-31771 SC18A | JF-PLSD-SW-24A | | | | | | TOT | | | | | | | | | | | | | | | |
| 10-31772 SC18B | JF-PLSD-SW-24B | | | | | | TOT | | | | | | | | | | | | | | | |
| 10-31773 SC18C | JF-PLSD-SW-37-7 | | | | | | TOT | | | | | | | | | | | | | | | |
| 10-31774 SC18D | JF-PLSD-SW-37-2 | | | | | | TOT | | | | | | | | | | | | | | | |
| 10-31775 SC18E | JF-PLSD-SW-Public | | | | | | TOT | | | | | | | | | | | | | | | |
| 10-31776 SC18F | JF-PLSD-SW-Public-D | | | | | | TOT | | | | | | | | | | | | | | | |

SC18:00004

Checked By JM Date 12/22/10

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: SC18MB

LIMS ID: 10-31771

Matrix: Stormwater

Data Release Authorized: *[Signature]*

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout
P2JO

Date Sampled: NA

Date Received: NA

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 0.05 | U |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 0.05 | U |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 0.5 | U |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 0.5 | U |

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: JF-PLSD-SW-24A

SAMPLE

Lab Sample ID: SC18A

LIMS ID: 10-31771

Matrix: Stormwater

Data Release Authorized: 

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout

P2JO

Date Sampled: 12/22/10

Date Received: 12/22/10

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 15.4 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 21.8 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 7.5 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 176 | |

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET


TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-24B
SAMPLE

Lab Sample ID: SC18B

LIMS ID: 10-31772

Matrix: Stormwater

Data Release Authorized: 

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout
P2JO

Date Sampled: 12/22/10

Date Received: 12/22/10

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 18.2 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 31.1 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 10.4 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 256 | |

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET


TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-37-7
SAMPLE

Lab Sample ID: SC18C

LIMS ID: 10-31773

Matrix: Stormwater

Data Release Authorized: 

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout
P2JO

Date Sampled: 12/22/10

Date Received: 12/22/10

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 18.1 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 31.1 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 10.6 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 259 | |

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-37-2
SAMPLE

Lab Sample ID: SC18D

LIMS ID: 10-31774

Matrix: Stormwater

Data Release Authorized

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout
P2JO

Date Sampled: 12/22/10

Date Received: 12/22/10

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 17.2 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 28.4 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 9.6 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 233 | |

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: JF-PLSD-SW-Public
SAMPLE

Lab Sample ID: SC18E

LIMS ID: 10-31775

Matrix: Stormwater

Data Release Authorized: *[Signature]*

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout
P2JO

Date Sampled: 12/22/10

Date Received: 12/22/10

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 19.6 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 32.3 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 11.0 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 272 | |

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: JF-PLSD-SW-Public-D
SAMPLE

Lab Sample ID: SC18F

LIMS ID: 10-31776

Matrix: Stormwater

Data Release Authorized: 

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout
P2JO

Date Sampled: 12/22/10

Date Received: 12/22/10

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-70-2 | Calcium | 0.05 | 20.9 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7439-95-4 | Magnesium | 0.05 | 34.2 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-09-7 | Potassium | 0.5 | 11.7 | |
| 3010A | 12/22/10 | 6010B | 12/23/10 | 7440-23-5 | Sodium | 0.5 | 291 | |

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET


TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SC18LCS

LIMS ID: 10-31771

Matrix: Stormwater

Data Release Authorized: 

Reported: 12/27/10

QC Report No: SC18-Floyd/Snider

Project: Jorgenson Forge PLO Cleanout

P2JO

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

| Analyte | Analysis Method | Spike Found | Spike Added | % Recovery | Q |
|-----------|-----------------|-------------|-------------|------------|---|
| Calcium | 6010B | 9.72 | 10.0 | 97.2% | |
| Magnesium | 6010B | 9.87 | 10.0 | 98.7% | |
| Potassium | 6010B | 10.1 | 10.0 | 101% | |
| Sodium | 6010B | 9.9 | 10.0 | 99.0% | |


Reported in mg/L

N-Control limit not met

Control Limits: 80-120%

METHOD BLANK RESULTS-CONVENTIONALS
SC18-Floyd/Snider




Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: NA
Date Received: NA

| Analyte | Method | Date | Units | Blank | ID |
|--------------|-----------|----------|----------|----------|----|
| Conductivity | EPA 120.1 | 12/23/10 | umhos/cm | < 1.00 U | |
| Salinity | SM 2520.B | 12/23/10 | ppt | < 0.10 U | |
| Chloride | EPA 300.0 | 12/23/10 | mg/L | < 0.1 U | |
| Sulfate | EPA 300.0 | 12/23/10 | mg/L | < 0.1 U | |

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10


Client ID: JF-PLSD-SW-24A
ARI ID: 10-31771 SC18A

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 12/22/10 122210#1 | EPA 150.1 | std units | 0.01 | 6.81 |
| Alkalinity | 12/22/10 122210#1 | SM 2320 | mg/L CaCO3 | 1.0 | 37.8 |
| Carbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | 37.8 |
| Hydroxide | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 12/23/10 122310#1 | EPA 120.1 | umhos/cm | 1.00 | 1,130 |
| Salinity | 12/23/10 122310#1 | SM 2520.B | ppt | 0.10 | 0.60 |
| Chloride | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 311 |
| Sulfate | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 40.4 |

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-24B
ARI ID: 10-31772 SC18B

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 12/22/10 122210#1 | EPA 150.1 | std units | 0.01 | 6.78 |
| Alkalinity | 12/22/10 122210#1 | SM 2320 | mg/L CaCO3 | 1.0 | 38.2 |
| Carbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | 38.2 |
| Hydroxide | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 12/23/10 122310#1 | EPA 120.1 | umhos/cm | 1.00 | 1,590 |
| Salinity | 12/23/10 122310#1 | SM 2520.B | ppt | 0.10 | 0.80 |
| Chloride | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 477 |
| Sulfate | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 60.0 |

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: *[Signature]*
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10


Client ID: JF-PLSD-SW-37-7
ARI ID: 10-31773 SC18C

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 12/22/10 122210#1 | EPA 150.1 | std units | 0.01 | 6.88 |
| Alkalinity | 12/22/10 122210#1 | SM 2320 | mg/L CaCO3 | 1.0 | 38.9 |
| Carbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | 38.9 |
| Hydroxide | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 12/23/10 122310#1 | EPA 120.1 | umhos/cm | 1.00 | 1,630 |
| Salinity | 12/23/10 122310#1 | SM 2520.B | ppt | 0.10 | 0.80 |
| Chloride | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 490 |
| Sulfate | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 62.5 |

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10


Client ID: JF-PLSD-SW-37-2
ARI ID: 10-31774 SC18D

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 12/22/10 122210#1 | EPA 150.1 | std units | 0.01 | 6.96 |
| Alkalinity | 12/22/10 122210#1 | SM 2320 | mg/L CaCO3 | 1.0 | 32.4 |
| Carbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | 32.4 |
| Hydroxide | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 12/23/10 122310#1 | EPA 120.1 | umhos/cm | 1.00 | 1,490 |
| Salinity | 12/23/10 122310#1 | SM 2520.B | ppt | 0.10 | 0.70 |
| Chloride | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 441 |
| Sulfate | 12/23/10 122310#1 | EPA 300.0 | mg/L | 10.0 | 54.5 |

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10


Client ID: JF-PLSD-SW-Public
ARI ID: 10-31775 SC18E

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 12/22/10 122210#1 | EPA 150.1 | std units | 0.01 | 6.85 |
| Alkalinity | 12/22/10 122210#1 | SM 2320 | mg/L CaCO3 | 1.0 | 39.2 |
| Carbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | 39.2 |
| Hydroxide | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 12/23/10 122310#1 | EPA 120.1 | umhos/cm | 1.00 | 1,700 |
| Salinity | 12/23/10 122310#1 | SM 2520.B | ppt | 0.10 | 0.90 |
| Chloride | 12/23/10 122310#1 | EPA 300.0 | mg/L | 20.0 | 519 |
| Sulfate | 12/23/10 122310#1 | EPA 300.0 | mg/L | 20.0 | 64.9 |

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10


Client ID: JF-PLSD-SW-Public-D
ARI ID: 10-31776 SC18F

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 12/22/10 122210#1 | EPA 150.1 | std units | 0.01 | 6.74 |
| Alkalinity | 12/22/10 122210#1 | SM 2320 | mg/L CaCO3 | 1.0 | 38.8 |
| Carbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | 38.8 |
| Hydroxide | 12/22/10 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 12/23/10 122310#1 | EPA 120.1 | umhos/cm | 1.00 | 1,750 |
| Salinity | 12/23/10 122310#1 | SM 2520.B | ppt | 0.10 | 0.90 |
| Chloride | 12/23/10 122310#1 | EPA 300.0 | mg/L | 20.0 | 529 |
| Sulfate | 12/23/10 122310#1 | EPA 300.0 | mg/L | 20.0 | 67.8 |

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11


Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: NA
Date Received: NA

| Analyte/Method | QC ID | Date | Units | LCS | Spike Added | Recovery |
|-----------------------|-------|----------|-----------|--------|-------------|----------|
| pH EPA 150.1 | ICVL | 12/22/10 | std units | 6.99 | 7.00 | 0.01 |
| Salinity SM 2520.B | ICVL | 12/23/10 | ppt | 43,400 | 47,600 | 91.2% |

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

STANDARD REFERENCE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized: 
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: NA
Date Received: NA

| Analyte/SRM ID | Method | Date | Units | SRM | True Value | Recovery |
|-----------------------------|-----------|----------|------------|------|------------|----------|
| Alkalinity ERA #P114506 | SM 2320 | 12/22/10 | mg/L CaCO3 | 99.5 | 102 | 97.5% |
| Conductivity Ricca #3193 | EPA 120.1 | 12/23/10 | umhos/cm | 984 | 1,000 | 98.4% |
| Chloride ERA #230109 | EPA 300.0 | 12/23/10 | mg/L | 3.0 | 3.0 | 100.0% |
| Sulfate ERA #220109 | EPA 300.0 | 12/23/10 | mg/L | 3.0 | 3.0 | 100.0% |

REPLICATE RESULTS-CONVENTIONALS
SC18-Floyd/Snider



Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

A handwritten signature, likely of the analyst or supervisor, written in dark ink.

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

| Analyte | Method | Date | Units | Sample | Replicate(s) | RPD/RSD |
|---|-----------|----------|------------|--------|--------------|---------|
| ARI ID: SC18A Client ID: JF-PLSD-SW-24A | | | | | | |
| pH | EPA 150.1 | 12/22/10 | std units | 6.81 | 6.79 | 0.02 |
| Alkalinity | SM 2320 | 12/22/10 | mg/L CaCO3 | 37.8 | 37.5 | 0.8% |
| Carbonate | SM 2320 | 12/22/10 | mg/L CaCO3 | < 1.0 | < 1.0 | NA |
| Bicarbonate | SM 2320 | 12/22/10 | mg/L CaCO3 | 37.8 | 37.5 | 0.8% |
| Hydroxide | SM 2320 | 12/22/10 | mg/L CaCO3 | < 1.0 | < 1.0 | NA |
| Chloride | EPA 300.0 | 12/23/10 | mg/L | 311 | 317 | 1.9% |
| Sulfate | EPA 300.0 | 12/23/10 | mg/L | 40.4 | 42.1 | 4.1% |
| ARI ID: SC18B Client ID: JF-PLSD-SW-24B | | | | | | |
| Conductivity | EPA 120.1 | 12/23/10 | umhos/cm | 1,590 | 1,600 | 0.6% |
| Salinity | SM 2520.B | 12/23/10 | ppt | 0.80 | 0.80 | 0.0% |

pH is evaluated as the Absolute Difference between the values rather than
Relative Percent Difference



Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 21, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SD56

Dear Tom:

Please find enclosed analytical results and the original and a revised copy of the Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted one water sample on January 6, 2011. The samples were received in good condition.

The samples were analyzed for total metals and general chemistry parameters, as requested.

No analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211

Enclosures

cc: eFile SD56

KB/kb

Page 1 of _____

[illegible]

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

PRESERVATION VERIFICATION 01/06/11

Page 1 of 1



ARI Job No: SD56

PC: Kelly

VTSR: 01/06/11

Inquiry Number: NONE

Analysis Requested: 01/06/11

Contact: Ernst, Will

Client: The Boeing Company

Logged by: AV

Sample Set Used: Yes-440

Validatable Package: No

Deliverables:

Project #: BP02-BOE CMI11 Task 1.1

Project: Boeing Plant 2

Sample Site:

SDG No:

Analytical Protocol: In-house

| LOGNUM ARI ID | CLIENT ID | CN >12 | WAD >12 | NH3 <2 | COD <2 | FOG <2 | MET <2 | PHEN <2 | PHOS <2 | TKN <2 | NO23 <2 | TOC <2 | S2 >9 | AK102 <2 | Fe2+ <2 | DMET FLT | DOC FLT | PARAMETER | ADJUSTED TO | LOT NUMBER | AMOUNT ADDED | DATE/BY |
|------------------|-------------------|-----------|------------|-----------|-----------|-----------|-------------|------------|------------|-----------|------------|-----------|----------|-------------|------------|-------------|------------|-----------|----------------|---------------|-----------------|---------|
| 11-298 SD56A | LDW-Stilling Well | | | | | | TOT 9.57 | | | | | | | | | | | | | | | |

Checked By

AV

Date

1/6/11



Cooler Receipt Form

ARI Client: Boeing

COC No(s): _____ (NA)

Assigned ARI Job No: SD56

Project Name: Boeing Plant 2

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of cooler? YES (NO)

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 999411019

Cooler Accepted by: AV Date: 1/6/11 Time: 1430

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice Gel Packs Baggies Foam Block Paper Other: empty bottles)

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI (NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 1/6/11 Time: 1435

**** Notify Project Manager of discrepancies or concerns ****

| Sample ID on Bottle | Sample ID on COC | Sample ID on Bottle | Sample ID on COC |
|---------------------|------------------|---------------------|------------------|
| | | | |
| | | | |
| | | | |
| | | | |

Additional Notes, Discrepancies, & Resolutions:


By: _____ Date: _____

| | | |
|--------------------------------------|---------------------------------|--|
| Small Air Bubbles ~2mm | Peabubbles 2-4 mm | LARGE Air Bubbles > 4 mm |
|--------------------------------------|---------------------------------|--|

| |
|-------------------|
| Small → "sm" |
| Peabubbles → "pb" |
| Large → "lg" |
| Headspace → "hs" |

SAMPLE RESULTS-CONVENTIONALS
SD56-The Boeing Company



Matrix: Stormwater
Data Release Authorized: 
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: 01/06/11
Date Received: 01/06/11


Client ID: LDW-Stilling Well
ARI ID: 11-298 SD56A

| Analyte | Date Batch | Method | Units | RL | Sample |
|--------------|----------------------|-----------|------------|------|---------|
| pH | 01/06/11 010611#1 | EPA 150.1 | std units | 0.01 | 6.73 |
| Alkalinity | 01/07/11 010711#1 | SM 2320 | mg/L CaCO3 | 1.0 | 55.2 |
| Carbonate | 01/07/11 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Bicarbonate | 01/07/11 | SM 2320 | mg/L CaCO3 | 1.0 | 55.2 |
| Hydroxide | 01/07/11 | SM 2320 | mg/L CaCO3 | 1.0 | < 1.0 U |
| Conductivity | 01/11/11 011111#1 | EPA 120.1 | umhos/cm | 1.00 | 7,400 |
| Salinity | 01/11/11 011111#1 | SM 2520.B | ppt | 0.10 | 4.00 |
| Chloride | 01/18/11 011811#1 | EPA 300.0 | mg/L | 100 | 2,510 |
| Sulfate | 01/08/11 010811#1 | EPA 300.0 | mg/L | 10.0 | 363 |

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL
RESOURCES
INCORPORATED 


Matrix: Stormwater
Data Release Authorized: 
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

| Analyte | Method | Date | Units | Blank | ID |
|--------------|-----------|----------|----------|----------|----|
| Conductivity | EPA 120.1 | 01/11/11 | umhos/cm | < 1.00 U | |
| Salinity | SM 2520.B | 01/11/11 | ppt | < 0.10 U | |
| Chloride | EPA 300.0 | 01/18/11 | mg/L | < 0.1 U | |
| Sulfate | EPA 300.0 | 01/08/11 | mg/L | < 0.1 U | |

LAB CONTROL RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL
RESOURCES
INCORPORATED 

Matrix: Stormwater
Data Release Authorized: 
Reported: 01/21/11


Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

| Analyte/Method | QC ID | Date | Units | LCS | Spike Added | Recovery |
|-----------------------|-------|----------|------------|--------|-------------|----------|
| pH EPA 150.1 | ICVL | 01/06/11 | std. units | 7.02 | 7.00 | 0.02 |
| Salinity SM 2520.B | ICVL | 01/11/11 | ppt | 43,300 | 47,600 | 91.0% |

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

STANDARD REFERENCE RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL
RESOURCES
INCORPORATED 


Matrix: Stormwater
Data Release Authorized: 
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

| Analyte/SRM ID | Method | Date | Units | SRM | True Value | Recovery |
|-----------------------------|-----------|----------|------------|------|------------|----------|
| Alkalinity ERA #P114506 | SM 2320 | 01/07/11 | mg/L CaCO3 | 99.4 | 102 | 97.5% |
| Conductivity Ricca #3193 | EPA 120.1 | 01/11/11 | umhos/cm | 993 | 1,000 | 99.3% |
| Chloride ERA #230109 | EPA 300.0 | 01/18/11 | mg/L | 3.1 | 3.0 | 103.3% |
| Sulfate ERA #220109 | EPA 300.0 | 01/08/11 | mg/L | 3.1 | 3.0 | 103.3% |

REPLICATE RESULTS-CONVENTIONALS
SD56-The Boeing Company



Matrix: Stormwater
Data Release Authorized: 
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: 01/06/11
Date Received: 01/06/11

| Analyte | Method | Date | Units | Sample | Replicate(s) | RPD/RSD |
|--|-----------|----------|------------|--------|--------------|---------|
| ARI ID: SD56A Client ID: LDW-Stilling Well | | | | | | |
| pH | EPA 150.1 | 01/06/11 | std units | 6.73 | 6.74 | 0.01 |
| Alkalinity | SM 2320 | 01/07/11 | mg/L CaCO3 | 55.2 | 55.3 | 0.2% |
| Carbonate | SM 2320 | 01/07/11 | mg/L CaCO3 | < 1.0 | < 1.0 | NA |
| Bicarbonate | SM 2320 | 01/07/11 | mg/L CaCO3 | 55.2 | 55.3 | 0.2% |
| Hydroxide | SM 2320 | 01/07/11 | mg/L CaCO3 | < 1.0 | < 1.0 | NA |
| Conductivity | EPA 120.1 | 01/11/11 | umhos/cm | 7,400 | 7,400 | 0.0% |
| Salinity | SM 2520.B | 01/11/11 | ppt | 4.00 | 4.00 | 0.0% |

pH is evaluated as the Absolute Difference between the values rather than
Relative Percent Difference

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LDW-Stilling Well
SAMPLE

Lab Sample ID: SD56A

LIMS ID: 11-298

Matrix: Stormwater

Data Release Authorized: 

Reported: 01/14/11

QC Report No: SD56-The Boeing Company

Project: Jorgensen Forge PLO

7KPL2JOR

Date Sampled: 01/06/11

Date Received: 01/06/11

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|-------|---|
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7440-70-2 | Calcium | 0.05 | 62.5 | |
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7439-95-4 | Magnesium | 0.05 | 163 | |
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7440-09-7 | Potassium | 0.5 | 53.4 | |
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7440-23-5 | Sodium | 0.5 | 1,460 | |

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: SD56MB

LIMS ID: 11-298

Matrix: Stormwater

Data Release Authorized: 

Reported: 01/14/11

QC Report No: SD56-The Boeing Company

Project: Jorgensen Forge PLO

7KPL2JOR

Date Sampled: NA

Date Received: NA

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte | RL | mg/L | Q |
|--------------|--------------|--------------------|------------------|------------|-----------|------|------|---|
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7440-70-2 | Calcium | 0.05 | 0.05 | U |
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7439-95-4 | Magnesium | 0.05 | 0.05 | U |
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7440-09-7 | Potassium | 0.5 | 0.5 | U |
| 3010A | 01/07/11 | 6010B | 01/10/11 | 7440-23-5 | Sodium | 0.5 | 0.5 | U |

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SD56LCS

LIMS ID: 11-298

Matrix: Stormwater

Data Release Authorized: 

Reported: 01/14/11

QC Report No: SD56-The Boeing Company

Project: Jorgensen Forge PLO

7KPL2JOR

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

| Analyte | Analysis Method | Spike Found | Spike Added | % Recovery | Q |
|-----------|-----------------|-------------|-------------|------------|---|
| Calcium | 6010B | 10.1 | 10.0 | 101% | |
| Magnesium | 6010B | 10.4 | 10.0 | 104% | |
| Potassium | 6010B | 10.6 | 10.0 | 106% | |
| Sodium | 6010B | 10.7 | 10.0 | 107% | |

Reported in mg/L

N-Control limit not met

Control Limits: 80-120%